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ABSTRACT

The major purpose of the experience described in this report was to determine what functional problems tended to develop under an individualized continual progress approach when large numbers of students were enrolled and where multiple instructional staff loads were maximized. This report describes: (1) the nature of the instruction, the basic components of which were: self-sequencing, self-pacing, instructional packages, mastery learning and behavioral objectives; (2) the background of the students involved; (3) the nature of the instructional team; (4) the testing facility; (4) student responses to the course in terms of study time and student attitudes toward the course; and (6) retention patterns. The report concludes with some observations on the problems encountered - the major one of which seemed to be the difficulty the instructional staff member had in changing his role from classroom lecturer to personal consultant - and suggestions for conducting a successful course. The Students' Guide and the research questionnaire are included in the appendix. (AF)

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A REPORT OF THE INDIVIDUALIZED CONTINUAL PROGRESS APPROACH TO THE TEACHING OF RESEARCH FOUNDATIONS AT STOUT STATE UNIVERSITY

by

E. Wayne Courtney

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The Graduate College

Menomonie, Wisconsin

August, 1969

HE001637

Statement of the Problem

During the 1969 Summer Session a new approach was used in the graduate instructional program for the teaching of the research foundations course. The central purpose of the experience was to determine the functional problems which tended to develop under an individualized continual progress approach when large numbers of students were enrolled and where multiple instructional staff loads were maximized. The present report describes some of the inherent problems which were apparent in the experience.

The Nature of the Instruction

The nature of the instruction utilized in this course was both old and new. The content was old; the way in which students were taught and evaluated was relatively new to most participants -- professors and students alike.

The objectives for the course were much the same as those which might be found in courses such as Research Procedures, Applied Research, and Educational Statistics which are commonly taught on most campuses.

Some of the new characteristics of this course were:

1. Behavioral objectives rather than general objectives.
2. Mastery learning rather than assuming that only some will succeed and that some must fail.
3. Instructional packages rather than regular lecture periods.
4. Self-paced instruction rather than teacher paced.
5. Self-selected instructional sequencing rather than teacher determined selection of sequence.

These five basic ideas, self-sequencing, self-pacing, instructional packages, mastery learning, and behavioral objectives are component parts of the method of individualized continual progress instruction. This is in contrast to the system of teacher paced, teacher directed, norm based, lock-step instruction which is commonly associated with college instruction. Hence, the primary difference between this course and others was in the method, not in the objectives.

The answer in changing the institutional method lies in efficiency. In this case, efficiency is defined as an improvement in the product. In other words, the improvement of the student.

Generally, there are two options in assessing improved efficiency, either we get the same output (quality of students) for less input (staff, time,

money, etc.) or we get better products (increased percent of high quality students) for the same input. The present objective was to increase the percentage of high quality students or, to be blunt about it, to give more students an "A" grade or "pass" grade in the course.

In fact, the theoretical framework which guided the development of this course suggested that each person who entered the course would ultimately complete the course successfully and receive an "A" or "pass" grade, which represented mastery of the objectives of the course.

Consider now why each student was expected to get an "A" or "pass" grade in the course. One reason was that experience had shown that each of the competencies included for instruction could be attained by <u>any</u> graduate student who was willing to try. Another reason was that evaluation was based upon whether the student did, in fact, <u>attain the objective</u>, not on how he did <u>compared</u> to the rest of the class.

For example, here is one of the course objectives, stated in behavioral terms. Given three (3) computed "r" values, the student will, in each case and in writing, be able to interpret the "r" in terms of the following relationships:

A. Percent of commonality

B. Strength of relationships

C. Direction of relationships

Experience with students during the previous year at Stout had shown that after appropriate instruction any graduate student could do this. Successful attainment of the objective was required to complete the course. Notice that no effort was made to determine who was best (or worst) at doing this objective. This was not considered as important anyway. The only important consideration was that the student could do the objective according to the conditions stated. The course was designed to <u>assure</u> that

the student could do it if he was willing to take advantage of the nature of the course. Thus, successful mastery of all of the course objectives logically led to a passing grade. Pass/fail would be the optimum way to "grade" a course like this; however, actual grade assignment was dictated by the university.

If the student did not finish all of the objectives by the end of the time of his enrollment, he was given a grade of "Incomplete" until such time that he was able to complete the course. Under this arrangement, the student could complete the course in less time than the period of enrollment, and, as shown in Table III, many students did complete early. Hence, the reason for the course was to teach the student to be able to do something; when he could do it, he was finished -- the time required was not really important. It was performance that counted, not how long it took, or how hard he worked, or didn't work.

Let us reconsider what we have implied and said. We have mentioned behavioral objectives. These specify what the student was able to do. Time was eliminated as a consideration for evaluation of performance, thus allowing for self-pacing. The successful attainment of objectives was the only means for assuring performance which provided mastery learning as the criterion for evaluation, rather than group norms and curves.

Quite obviously, if time or pacing was determined by the student, we expected to have students strung out all through the course and the instructional package allowed for this.

Instructional packages were previously developed for each major objective of the course and they were designed to be self instructional so that the student could procede at his own pace. He had simply to secure the package, complete it, take the criterion evaluation, and go on to the next package

of his choice.[1]

The student, in consultation with his instructor, planned the instruction. The reason for self selection was one of the motivation and psychological sequencing. Learning takes place best when the learner is motivated and involved in his own learning process. Self-pacing and self-selection are two small steps in that direction.

This introduction has served to inform you of the method of an individualized continual program course format using mastery learning. The basic ideas represented by this approach include behavioral objectives, instructional packages, mastery learning, self-pacing and self-sequencing of instructional packages. These ideas compliment and encompass the nature of the instruction included in this report.

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[1]This approach is detailed in the Introductory Section of the materials by Sedgwick and Courtney titled Elements of Research Foundations published in 1969 at Stout State University.

The Students

A total of 219 graduate students were enrolled for the instruction with a modified flexible schedule (see Appendix) being used for the course. The table below indicates the enrollments by sections and classes.

TABLE I

Enrollment by Sections and Classes

Periods	421-540*	421-510	Σ
3 (9:30)	59	72	131
6 (12:30)	47	41	88
Σ	106	113	219

The students enrolled for the course reflected a diversity of backgrounds although, for the most part, the majority represented education and teaching backgrounds. The average age for the group was 29.4 years with 6.2 years of field experience in their chosen occupations and a range of of 0 - 30 years. 79.8 percent were married and 70 percent were at least in their second graduate semester enrollments. The composition of the enrollees by graduate major is shown below:

*421-540 (Research Foundations) is a four semester credit course which is required of all graduate students. The course 421-510 (Applied Research) is a two credit course which is transitional in terms of being phased out as a part of the former research requirement for all graduate students.

TABLE II

Enrollments by Major

Major	421-510	421-540	Total
Home Economics Education	10	3	13
Food Science	1	0	1
Clothing and Textiles	1	0	1
Vocational Education	21	27	48
Industrial Education	38	38	76
Audio-Visual Communication	12	11	23
Vocational Rehabilitation	0	5	5
Guidance and Counseling	30	19	49
Special and Non-Classified	0	3	3
Total	113	106	219

The Instructional Team

In all, a total of four (4) instructors were involved with the teaching of the courses with 2 2/3 staff loads assigned to the program. All instructors were experienced teachers who held doctorates and who were knowledgeable about applied and theoretical research and statistical methods. The four research instruction team members conducted the large group lectures, guided small group discussions, and provided for the individual consultation activities. The team was assisted in evaluation activities by three (3) graduate assistants who had completed the packaged course during the previous semester. Two of the staff members had taught the course during the previous two semesters when the packaged instruction was being developed.

The Testing Facility

All package evaluations were administered through a testing room which was available in the Graduate College Office Building. Although the room measured nine by sixteen feet and was provided with several wall work spaces, it proved not to be adequate for the evaluation activities. File drawers, which were located in the room, contained the evaluations, and graduate assistants, who were available during the hours of 9:30-4:30 each day, administered the examinations. Overflow space for testing was available in an adjacent conference area.

Desk calculators, which were essential for the completion of several of the instructional packages, were not centrally available to the testing center but were scattered throughout the campus complex. As a result, students were required to leave the testing facility in order to complete some of the computational evaluations.

The Student Response

Graduate students representing fourteen states participated in the research instruction experience during the 1968-69 summer session at Stout. In all, the enrollees in the program took and mastered a total of 4860 package evaluations, or a mean total of 22.19 package tests per student. A total of 191 students successfully completed all of the course requirements during the scheduled eight weeks program with only 28, or 12.8 percent receiving an "Incomplete" or "Withdraw Passing" grade for the course. All of those who mastered all of the package evaluations received and "A" grade for the course.

Since the instruction was based upon a self-paced arrangement, some students completed the requirements in advance of the eight week completion date. A table showing the progress of student completions for the course is shown below:

TABLE III

Number of Weekly Course Completions

Week	421-510 - 2 credits (18 packages)	421-540 - 4 credits (27-32 packages)	Total	Commulative Percent Completed
1	0	0	0	0.0
2	1	0	1	0.5
3	4	0	4	2.3
4	6	0	6	5.0
5	2	5	7	8.2
6	16	7	23	18.7
7	18	30	48	40.6
8	53	49	102	87.2
Total	100	91	191	

(Cummulative percentages completed are based upon a total number of 219 students who were enrolled for the instruction.)

Thirty-nine instructional packages were available for the course, thirty-two of which were developed by Courtney and Sedgwick in their Elements of Research Foundations publication with the other seven being developed by G. S. Wall. Student requirements varied according to their respective majors and course enrollment with 18-32 instructional packages being taken by each student.*

TABLE IV

Number of Package Completions

Week	421-510	421-540	Total
1	0	0	0
2	907	988	1895
3	423	708	1131
4	198	437	635
5	106	233	339
6	117	141	258
7	64	264	328
8	109	165	274
Total	1924	2936	4860

(Note: Counts were started at the end of the second week.)

Package Study Time

During the course, students were asked to record the amount of time which they spent on individual packages. The records were collected at the end of the semester. The average times are shown in Table V where means are listed by package number and title.

*See Appendix for a list of package requirements for 421-510 and 421-540 students.

TABLE V

Study Time Record for Instructional Packages

Package Number	Package Title	Mean Study Time Per Package (Hours)
8975	Problem Solving Procedures	2.20
4717	Kinds and Purposes of Research	2.37
3675	Evidence Data	2.18
5398	Data Gathering Procedures	2.67
0600	Research Forms, Devices, Instruments, Tools	3.29
8865	Form, style, and Organization	3.56
2649	Quotations, Footnotes, and Bibliography	4.43
3757	Hypotheses Definitions	0.86
6949	Hypotheses Writing	1.43
1020	Reference Sources	2.91
2547	Use of Rho	0.83
2834	Ordinal Scale Data	0.71
7579	Computation of Rho	1.63
1543	Interpretation of r	0.82
5083	One-and Two-Tailed Hypotheses Statements	0.65
5010	Computing Means and Standard Deviations	2.25
4766	Elementary Research Design	4.03
2513	Research Planning	12.33
0605	Rnadom Sampling	0.65
7302	Use of Pearson r	0.86
4597	Computation of Pearson r	3.54
2825	Use of Chi-square	0.77
0740	Nominal Scale Data	0.73

Package Number	Package Title	Mean Study Time Per Package (Hours)
1223	Use of Student's t	0.76
3917	Equidistant Interval Scales	0.80
2818	Computing Chi-square	3.70
5269	Interpreting Chi-square Values	0.79
5838	Reading the Chi-square Table	0.83
3440	Computing the Student's t Test	1.62
9136	Interpreting Student's t Values	0.93
2522	Use of F Statistic	0.91
4596	Validity	1.52
7235	Reliability	2.09
0320	Reading Student's table	0.25
9331	Interpretation of F	0.70
		70.59

Student Attitude

Near the end of the eight week instructional period, students were asked to evaluate the instruction. Several attitudinal items concerned with the methodology and the effectiveness of the packaged training were included in an attitude instrument. The results are shown below:*

1) 12.8% of the enrolled students had had previous experience with individualized packaged instruction
2) when asked if the content covered in the large group lectures should deal specifically with the package materials, only 42.4% felt that it should
3) 84.4% responded that individual conferences should be used specifically for handling problems which relate to the packages

*See the Appendix for a copy of the attitude instrument.

4) 96.3% felt that attendance at lectures should be optional

5) under the packaged approach, 84.2% of the respondents felt that the individual attention which was provided was adequate

6) only 5.5% indicated that there should be more than two large group lectures per week in the course

7) nearly half of the group (46.7%) thought that more small group discussion periods would have been helpful to them

8) almost all of the students (92.5%) responded that the packaged approach should be recommended for other courses

9) 90.6% of the group thought that the use of behavioral objectives was desirable and necessary in mastery learning

10) almost one-fourth of the students (24.7%) felt that the self-tests within the individual packages were too easy

11) more than half of the group (56.8%) expressed that the retention levels under the package approach would be greater than under the traditional lecture approach

12) over ninety percent (90.7%) of the enrolled students felt that the team teaching approach was desirable while 76.1% thought that the course content was appropriate for meeting their professional needs

13) 80.5% felt that the large group presentations were appropriate to the content of the course

14) most of the students (80.7%) responded that the physical facilities provided for testing were inadequate

15) 60.5% of the group felt that individual conferences with the instructor had been influential in their motivation toward the instruction

16) a majority (77.9%) of the students thought that lab assistants were available when they were needed and 68.2% indicated that lab assistants should be available in the testing center for eight hours or more per

day. 74.0% of the group said that their instructor was available when he was needed.

Retention Patterns

At the end of the seventh week of the eight week long summer session, an unannounced retention examination was administered to the group. A total of ninety-eight students who were attending a voluntary large group lecture session were given an examination which consisted of representative items selected from package tests. The students were asked to complete the examination, without reviewing their notes, recording the total examination time on the front but not writing their names on the cover. The ninety-eight anonymous examinations were scored with a resulting average correct response of 65.5% and a total average examination time per student of 25 minutes.

Some Observations and Suggestions

It is obvious that individualized continual progress instruction using instructional packages and mastery learning is feasible and functional for teaching research foundations and statistical concepts. Although the method of instruction may not be more efficient than the traditional lecture instruction in terms of staff requirements and space needs, there is ample evidence to suggest that students needs are more adequately met and that the quality of both learning and content is greatly improved. Related studies have shown that retention of content is also increased under the instructional package instruction approach.*

In spite of the advantages which are obvious under such an arrangement, there are several shortcomings which should be pointed out to administrators and curriculum coordinators. Some of the observations arising from the present study are as follows:

1) Perhaps the greatest problem confronting administrators who choose to adopt individualized continual progress instruction programs is the difficult adjustment which their staff members experience in changing to the new roles. Under such an arrangement, instructors must devote a maximum amount of time and effort to individual consultation activities and a minimum amount to classroom rhetoric and lecture. Such changes in roles are not easily made by staff members who have been accustomed to the rewards and status of traditional classroom teaching.

Hence, serious thought and planning should be devoted to the proper assignment of staff members so that they, as individuals,

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*Moore, J. William, et al. "An Evaluation of the Continuous Progress Concept of Instruction with University Students," Bucknell University, 1968, pp. 1-19 (Mimeographed).

may not only contribute substantially according to their skills and interests, but also to the benefit and smooth operation of the instructional team. A coordinator of research instruction should be appointed to direct the program and he should make every effort to see that each staff member is given large group lecture, small group discussion, and consultation assignments and responsibilities according to the staff member's individual capabilities and interests.

2) Adequate testing facilities must be made available if the packaged approach is to be functional. The greatest frustration which students encountered during the period covered by the present study was in the inefficiency and inadequacy of the testing facility. This shortcoming included both the physical inadequacy of the testing rooms and the lack of an available calculator center which was centrally located.

It is imperative that the success of such instructional programs in the future with large groups of students will necessitate the availability of a space containing individual corrals for student testing and adjacent offices for test administration, scoring, and consultation.

3) A learning center with a multi-media capability is an absolute requirement for such a program involving large numbers of students. Perhaps this could be organized around or into the present library and audio-visual communications complex. For the present study, where appropriate media were not available, except for text and workbook materials, this presented no apparent problem, although the existing conditions no doubt hampered the learning efficiency of the students. The lack of a calculator laboratory room was an obvious shortcoming.

Previous experimentation has shown that any means of communication which an instructor uses to produce better learning in class may be adapted to independent study. An individual student can use any such means at any time convenient to him and he should be given this option.

What is here proposed is a library of record materials and media with the opportunity for the student to study independently, outside the classroom. In order to do this, however, a place must be provided where he can use tapes, audio-tapes, filmstrips, slides, programmed books, and films, all in an independent venture. Such learning centers have been organized and are being operated at other institutions with a minimum outlay in terms of costs.* There is no reason why such a center cannot be developed at Stout.

4) Students should have immediate feedback regarding whether or not they have mastered the package evaluations. This did not present a particularly difficult problem in the present study because graduate assistants, who could evaluate the results of the tests, were available and competent. When students do not master the tests, they should be immediately counseled about their problems and the difficulty resolved on the spot through the individual staff consultation sessions. Hence, the para-professional in charge of test administration should be alert to the problem difficulties of the student and should direct him to the staff consultant at once. This necessitates that the staff member be accessible and available during any time period when his students may be engaged in individual package testing. Hence, his office should be located physically close to the testing center.

5) Even though the behavioral objectives stated quite implicitly the competency levels expected of each student and, at the same time,

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*Reichart, Robert R. "Forestry Education--A Different Approach," Journal of Forestry, Society of American Foresters, Washington, D. C., September 1967.

provided him with the independence and counsel necessary for attaining the conditions of the objectives, there were encountered several obvious incidences of student cheating. This situation may not have been as great a problem had only one instructor been assigned to the teaching, had the group size been more manageable, and had an appropriate testing facility been made available. However, when groups are large, and when more than one section of a course is being offered, it appears that this problem will be present.

6) Although very few students were not motivated to independent effort, there were 22 students out of 219 total who received "Incomplete" grades as the course terminated. A small percentage of students, numbering 2 , completed no packages and, although an attempt was made to contact them at the end of the second and fifth weeks after enrollment, they still did not respond. Thus, a more adequate system is needed for contacting non-responding enrollees so that their individual needs may be handled.

7) If such a program of instruction is to be effective, the large group sessions should include a broader, more varied type of topic coverage than was provided during the scope of the present study. Staff members who possess unique research abilities, or who have had experience worthy of being communicated to the research instruction, should be invited into the large group sessions as <u>guest lecturers</u>. These appearances should not be extemporaneous but should be planned and scheduled so that the student can properly choose those which he feels will be of benefit to fulfilling his individual needs and interests. Large group lecture sessions should continue to have <u>voluntary</u> attendance restrictions.

8) It would be desirable if graduate students were sequenced into the Research Foundations course during the second summer of their enrollments

or during the first semester of enrollment if they are on campus during the regular school year. Some of the activities pertaining to research proposal planning dictate that students be ready to select and develop research problems. Experience has shown that these enrollment periods are most appropriate for making decisions pertinent to the accomplishment of these requirements.

9) A duplication facility should be available for student use in order that they may develop proposal materials and other media for classroom discussions. Allocations should be provided in the departmental budget to accomodate the expenses associated with this facility.

Appendix

Students' Guide
(Supplement)

for

421-540 Research Foundations

and
421-510 Applied Research

June, 1969

INTRODUCTION

The following materials include directions for the administration of the course in Research Foundations. You have been given a copy of the instructional booklet titled Elements of Research Foundations which contains thirty-two packages. Students will be required to purchase this set of packages from the Stout State University Bookstore. In addition, seven (7) instructional packages (#'s 8975, 4717, 3675, 5398, 0600, 8865, and 2649) will be made available for distribution by Dr. Wall from his office in Graduate College room 5.

Included in the present "guide" are the following information sheets:

A. Schedule for the 1969 Summer Session

B. List of Packages Required of Students Enrolled in 421-510 Applied Research

C. List of Packages Required of Students Enrolled in 421-540 Research Foundations

D. Time Record For Instructional Packages

SCHEDULE

421-510 and 421-540

(1969 Summer Session)

Date	Topic	Instructor
June 17	Organization of the Course	Courtney
June 18	What is Research	Wall
June 19	Small group meetings*	Staff
June 23	Small group meetings	Staff
June 24	Characteristics of Research Proposals	Courtney
June 25	Small Group meetings	Staff
June 26	P. E. R. T. (film)	Staff
June 30	Small group meetings	Staff
July 1	H ypothesis	Courtney
July 2	Small group meetings	Staff
July 3	Small group meetings	Staff
July 7	Research Instruments	Wall
July 8	Small group meetings	Staff
July9	Applications of Correlational Techniques	N elson
July 10	Small group meetings	Staff
July 14	Computer Applications in Research	Brenner
July 15	Small group meetings	Staff
July 16	Survey Research Techniques of Computer Analysis	Brenner
July 17	Elements of Report Writing	Wall
July 18	E.R.I.C. - Library 14 (both sections)	H owison

Date	Topic	Instructor
July 21	Elements of Report Writing	Wall
July 22	Small group meetings	Staff
July 23	Data Processing Equipment -Key Punch (Demonstration)	Brenner
July 24	Data Processing Equipment - Optical Scan Machine(Demonstration)	Brenner
July 28	Data Processing Equipment - Computer (Demonstration)	Brenner
July 29	Small group meetings	Staff
July 30	Small group meetihgs	Staff
July 31	Interpretation of Research Findings	Wall
August 4	Small group meetings	Staff
August 5	Small group meetings	Staff
August 6	Small group meetings	Staff
August 7	Small group meetings	Staff

*Small group meetings will be held in Library 14, Graduate College 18, Graduate College Conference Room, Harvey H all 411, and other rooms specified by the individual instructors.

List of Packages Required of Students Enrolled in 421-510 Applied Research

Package Number	Title
3757	Hypotheses Definitions
6949	Hypotheses Writing
2513	Research Planning
0605	Random Sampling
1020	Reference Sources
2547	Use of Rho
2834	Ordinal Scale Data
7579	Computation of Rho
1543	Interpretation of r
2825	Use of Chi-square
0740	Nominal Scale Data
2818	Computing Chi-square
5838	Reading the Chi-square Table
5269	Interpreting Chi-square Values
1223	Use of student's t
3917	Equidistant Interval Scales
5083	One-and Two-tailed Hypotheses Statements
7302	Use of Pearson r

List of Packages Required of Students

Enrolled in 421-540 Research Foundations

Package Number	Title
8975	Problem Solving Procedures
4717	Kinds and Perposes of Research
3675	Evidence - Data
5398	Data Gatherinf Procedured
0600	Research Forms, Devices, Instruments, Tools
8865	Form,Style, and Organization
2649	Quotations, Footnotes, and Bibliography
3757	H ypotheses Definitions
6949	Hypotheses Writing
1020	Reference Sources
2547	Use of Rho
2834	Ordinal Scale Data
7579	Computation of Rho
2543	Interpretation of r
5083	One-and-Two-tailed Hypotheses Statements
5010	Computing Menas and Standart Deciations
4766	Elementary Research Design
2513	Research Planning
0605	Random Sampling
7302	Use of Pearson r
4597	Computation of Pearson r
2825	Use of Chi-square
0740	Nominal Scale Data
1223	Use of Student's t
3917	Equidistant Interval Scales
____	_____
____	_____
____	_____
____	_____
____	_____
____	_____
____	_____
____	_____

I In addition to the Instructional Packages which are included in the above list, the additional packages listed below will be required of students in each major.

Home Economics Education

Package Number	Title
3440	Computing Student's t
9136	Interpreting Student's t Values
0320	Reading Student's t Table
7235	Reliability
4596	Validity
2522	Use of the F statistic

Guidance and Counseling

7235	Reliability
4596	Validity

Vocational Education

2818	Computing Chi-square
5838	Reading the Chi-square Table
5269	Interpreting Chi-square Values
9136	Interpreting Student's t Values
2522	Use of the F Statistic

Industrial Education

7235	
7235	Reliability
4596	Validity
9136	Interpreting Student's t Values
2522	Use of the F Statistic
9331	Intrepretation of F

Audio-Visual Communications

4596	Validity
7235	Reliability

Clothing and Textiles

9331	Interpretation of F	9136	Interpreting Student's t Values
2786	Computation of F(Two-Way)	3440	Computing the Student's t
5005	Computation of F(One-Way)	1104	Research Models

Food Science and Nutrition

2818	Computing Chi-square	9136	Interpreting Student's t Values
5269	Interpreting Chi-square Values	2522	Use of F Statistic
5838	Reading the Chi-square Table	1104	Research Models
3440	Computing the Student's t Test	2786	Computation of F (Two-Way)

Vocational Rehabilitation

2818	Computing Chi-square		
4596	Validity	5269	Interpreting Chi-square Values
7235	Reliability	5838	Reading the Chi-square Table

(note: Please remove this sheet and place it with your instructional packages so that it may be redily available for record keeping.)

Time Record for Instructional Packages

During the present term, we are asking that students keep tæack of the time which they spend in completing the various individual packages for the course. Spaces are provided below for maintaining this record which is to be turned in th the instructor at the end of the course.

Package Number	Title	Time Spent on Each Package (Hours)
8975	Problem Solving Procedures	_____
4717	Kinds and Purposes of Research	_____
3675	Evidence Data	_____
5398	Data Gathering Procedures	_____
0600	Research Forms, Devices, Instruments, Tools	_____
8865	Form, style, and Organization	_____
2649	Qoutations, Footnotes, and Bibliography	_____
3757	Hypotheses Definitions	_____
6949	Hypotheses Writing	_____
1020	Reference Sources	_____
2547	Use of Rho	_____
2834	Ordinal Scale Data	_____
7579	Computation of Rho	_____
1543	Interpretation of r	_____
5083	One-andTwo-Tailed Hypotheses Statements	_____
5010	Computing Means and Standart Deviations	_____
4766	Elementary Research Design	_____
2513	Research Planning	_____
0605	Random Sampling	_____
7302	Use of Pearson r	_____
4597	Computation of Pearson r	_____
2825	Use of Chi-square	_____
0740	Nominal Scale Data	_____

Package Number	Title	Time Spent on Each Package (Hours)
1223	Use of Student's t	_____
3917	Equidistant Interval Scales	_____
2818	Computing Chi-square	_____
5269	Interpreting Chi-square Values	_____
5838	Reading the Chi-square Table	_____
3440	Computing the Student's "t" Test	_____
9136	Interpreting Student's "t" Values	_____
2522	Use of F Statistic	_____
1104	Research Models	_____
2786	Computation of F (Two Way)	_____
4596	Validity	_____
7235	Reliability	_____
0320	Reading Student's Table	_____
5005	Computation of F (One Way)	_____
0525	Reading the F Table	_____
9331	Interpretation of F	_____

RESEARCH QUESTIONNAIRE

This study is being conducted in order to gain some insights into the reactions of students to the courses 421-510 (Applied Research) and 421-540 (Research Foundations), a class in which you are currently enrolled. The study is primarily concerned with the motivational patterns, work load, and the way in which students react to individualized packaged instruction with regard to their graduate education.

In order to properly evaluate the course activities, we are asking that you complete the attached questionnaire, responding to the items by marking the appropriate response on the answer sheet that is provided. Please confine your responses to the appropriate sections of the answer sheet and avoid any stray marks. If you wish to change a response, please erase completely that response which you wish to change.

PART I

At the top of the machine scoring answer sheet is an area entitled IDENTIFICATION NUMBER. The questions that follow will be answered by filling in the number in the appropriate box and then blackening in the area to the right of the box that corresponds to the number that you have entered. The boxes will be numbered from 1 to 10 with box 1 being at the top of the page (the box with the heavy red arrow immediately above it).

1. In boxes 1 and 2, record your age to the nearest whole year. Enter the number in the box and then blacken the corresponding space to the right. (Example: If your age were 27, the 2 would be recorded in box 1 and the 7 in box 2.)

2. In boxes 3 and 4, record the number of years of teaching and/or industrial or professional experience that you have had. (Note: If you have had less than 10 years experience, enter the number in the form of 06, etc.)

3. In box 5, enter a 1 if you are enrolled in 421-510 Applied Research, or a 2 if you are enrolled in 421-540 Research Foundations.

4. In box 6, enter the number from the list below which corresponds to your graduate major.

    1. Home Economics Education
    2. Food Science & Nutrition
    3. Clothing and Textiles
    4. Vocational Education
    5. Industrial Education
    6. Audio-Visual Communications
    7. Vocational Rehabilitation
    8. Guidance/Counseling
    9. Special and/or non-classified

5. In boxes 7 and 8, enter the code for the state where you are from. The states and their respective codes are given below:

01	FOREIGN STUDENT	18	Kentucky	35	North Dakota
02	Alabama	19	Louisiana	36	Ohio
03	Alaska	20	Maine	37	Oklahoma
04	Arizona	21	Maryland	38	Oregon
05	Arkansas	22	Massachusetts	39	Pennsylvania
06	California	23	Michigan	40	Rhode Island
07	Colorado	24	Minnesota	41	South Carolina
08	Connecticut	25	Mississippi	42	South Dakota
09	Delaware	26	Missouri	43	Tennessee
10	Florida	27	Montana	44	Texas
11	Georgia	28	Nebraska	45	Utah
12	Hawaii	29	New Hampshire	46	Vermont
13	Idaho	30	New Jersey	47	Virginia
14	Illinois	31	New Mexico	48	Washington
15	Indiana	32	New York	49	West Virginia
16	Iowa	33	Nevada	50	Wisconsin
17	Kansas	34	North Carolina	51	Wyoming

6. In box 9, enter the code for your instructor:

1. Dr. Brenner
2. Dr. Courtney
3. Dr. Nelson
4. Dr. Wall

PART II

The remainder of this questionnaire will be answered by filling in your response to each item in the space provided on the answer sheet. Question 1 on the questionnaire will correspond to question 1 on the answer sheet, etc.

1. Sex:

   A. Male
   B. Female

2. Marital Status:

   A. Single
   B. Married
   C. Divorced
   D. Widowed

3. How many semesters have you been enrolled in the Graduate College of Stout State University? (Note: Summer Session counts as one semester.)

   A. 1
   B. 2
   C. 3
   D. 4
   E. 5 or more

4. Have you had previous experience with individualized packaged instruction?

   A. Yes
   B. No

5. Do you feel that the content covered in the large group lectures should deal specifically with the package materials?

   A. Yes
   B. No

6. Do you feel that individual conferences should be used specifically for handling problems which confront the students as he works the packages?

   A. Yes
   B. No

7. Do you feel that attendance at lectures should be optional?

   A. Yes
   B. No

8. Do you feel that the individual attention which was provided you was adequate?

   A. Yes
   B. No

9. Do you feel that there should be more than two large group lectures per week in the course?

   A. Yes
   B. No

10. Do you feel that more small group discussion periods would have been helpful to you?

   A. Yes
   B. No

11. I personally feel good about this type of instruction.

   A. Yes
   B. No

12. This type of instruction should be recommended for other courses.

   A. Yes
   B. No

13. The use of behavioral objectives id desirable and necessary in "Mastery" learning.

   A. Yes
   B. No

14. Self tests which were included in the packages were too easy.

   A. Yes
   B. No

15. The competencies learned in this course are important and useful.

A. Yes
B. No

16. Do you feel that the retention levels under the package approach will be greater than under the traditional lecture approach?

A. Yes
B. No

17. Do you feel that the team teaching technique used in this course was desirable?

A. Yes
B. No

18. Do you feel that the course content was appropriate for meeting your professional needs?

A. Yes
B. No

19. Do you feel that the large group presentation topics were appropriate to the content of the course?

A. Yes
B. No

20. Were adequate physical facilities provided for testing?

A. Yes
B. No

21. Do you feel that individual conferences with the instructor have been influential in your motivation toward the instruction?

A. Yes
B. No

22. Were the lab assistants available when you wanted to take a test?

A. Yes
B. No

23. If the answer to question 22 was no, please indicate the number of hours that you feel the lab assistants should be available during the day.

A. 6 hours
B. 7 hours
C. 8 hours
D. 9 hours
E. 10 hours or more

24. Was your instructor generally available when you needed to see him?

A. Yes
B. No

Thank you for your cooperation